

AMENDMENTS TO THE CLAIMS

1-15. (Cancelled)

16. (New) A hand-held electrostatic-painting spray gun comprising:

an atomizer provided at a forward end of the spray gun;

an external charging electrode disposed at an outer portion of the spray gun so as to project ahead of the atomizer, the external charging electrode being separated from a passage through which paint is to be supplied to the atomizer, with an electric insulation of the external charging electrode being maintained;

an electroconductive grip provided behind the atomizer; and

an electrode receptacle provided at an outer portion of a barrel the spray gun,

wherein an output terminal connected to a high voltage generator via a first high-resistance resistor maintaining electrical insulation from the passage through which paint is to be supplied, is connected to an electrical connecting portion provided at a bottom of the electrode receptacle, the external electrode being exposed at a forward end thereof and having a plug-in portion formed at a rear end thereof, the plug-in portion having a connecting terminal, the electrode and the connecting terminal being connected by a conductor,

wherein the connecting terminal and the electrical connecting portion are connectable by plugging the plug-in portion into the electrode receptacle, the external electrode as a whole being formed of an insulative material,

wherein the external electrode includes an engagement piece and the electrode receptacle includes a retention recess, the external electrode being freely connectable to and disconnectable from the electrode receptacle, wherein the external electrode is connectable to the electrode receptacle by plugging the plug-in portion into the electrode receptacle such that the engagement piece engages the retention recess.

17. (New) The spray gun according to claim 16, wherein a second high-resistance resistor is provided at the forward end of the external electrode.

18. (New) The spray gun according to claim 16, wherein:

a distance between the connecting terminal connected with the output terminal of the high voltage generator and an inlet end of the electrode receptacle is sufficiently long to prevent creepage discharging.

19. (New) The spray gun according to claim 16, wherein at least a portion of the electrode body comprises a bendable portion formed of a flexible or resilient material.

20. (New) The spray gun according to claim 16, wherein at least a portion of the electrode body is formed of a material having a lower strength than that of the electrode receptacle.

21. (New) An electrostatic-painting spray gun comprising:

an atomizer provided at a forward end of the spray gun;

an external charging electrode disposed at an outer portion of the spray gun so as to project ahead of the atomizer, the external charging electrode being separated from a passage through which paint is to be supplied to the atomizer, with an electric insulation of the external charging electrode being maintained; and

an electrode receptacle provided at an outer portion of the spray gun, an output terminal of a high voltage generator being connected to the electrode receptacle, wherein the external electrode is freely attachable to and removable from the electrode receptacle, the electrode receptacle having a plurality of grooves formed along an outer surface of the electrode receptacle so as to define a plurality of projections,

wherein the external electrode includes an electrode body formed from an insulative material, the electrode body having a charging electrode provided so as to be exposed at a forward end thereof and a plug-in portion formed at a rear end thereof, the plug-in portion having a connecting terminal arranged to electrically connect to the electrode receptacle so as to conduct electricity from the electrode receptacle to the charging electrode, the plug-in portion having a plurality of grooves formed along an outer surface of the plug-in portion so as to define a

plurality of projections, the plug-in portion being attachable to the electrode receptacle by inserting the projections of the plug-in portion into respective grooves of the electrode receptacle and by inserting the projections of the electrode receptacle into respective grooves of the plug-in portion, and

wherein a corrugated boundary surface formed by outer surfaces of the grooves and projections of the electrode receptacle and the plug-in portion is defined between an exposed end of the outer surface of the plug-in portion and an electrical connection formed between the connecting terminal and the electrode receptacle so as to provide a long creepage distance.

22. (New) The spray gun according to claim 21, wherein at least a portion of the electrode body comprises a bendable portion formed of a flexible or resilient material.

23. (New) The spray gun according to claim 21, wherein at least a portion of the electrode body is formed of a material having a lower strength than that of the electrode receptacle.